OIPE

RAW SEQUENCE LISTING

D1

DATE: 11/26/2001

TIME: 12:34:34



Input Set : A:\620-139.app

Output Set: N:\CRF3\11212001\1820745.raw

PATENT APPLICATION: US/09/820,745



```
3 <110> APPLICANT: Blundell, Tom L
              Abell, Christopher
      4
              Inoue, Tsuyoshi
      5
              von Delft, Frank
      8 <120> TITLE OF INVENTION: Crystal Structure
     10 <130> FILE REFERENCE: 620-139
     12 <140> CURRENT APPLICATION NUMBER: US 09/820,745
     13 <141> CURRENT FILING DATE: 2001-03-30
     15 <160> NUMBER OF SEQ ID NOS: 12
     17 <170> SOFTWARE: PatentIn Ver. 2.1
     19 <210> SEQ ID NO: 1
     20 <211> LENGTH: 8
     21 <212> TYPE: PRT
     22 <213> ORGANISM: Artificial Sequence
     24 <220> FEATURE:
     25 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved
              sequence motif
     28 <400> SEQUENCE: 1
     29 Leu Val Gly Asp Ser Leu Gly Met
     30 1
     33 <210> SEO ID NO: 2
     34 <211> LENGTH: 6
     35 <212> TYPE: PRT
     36 <213> ORGANISM: Artificial Sequence
     38 <220> FEATURE:
     39 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved
              sequence motif
     42 <400> SEQUENCE: 2
     43 Val Lys Ile Glu Gly Gly
     47 <210> SEQ ID NO: 3
     48 <211> LENGTH: 8
     49 <212> TYPE: PRT
     50 <213> ORGANISM: Artificial Sequence
     52 <220> FEATURE:
     53 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved
              sequence motif
     56 <220> FEATURE:
     57 <221> NAME/KEY: SITE
     58 <222> LOCATION: (3)
     59 <223> OTHER INFORMATION: Xaa is a hydrophobic residue
     61 <400> SEQUENCE: 3
W--> 62 Gly His Xaa Gly Leu Thr Pro Gln
     63
        1
     66 <210> SEQ ID NO: 4
     67 <211> LENGTH: 7
     68 <212> TYPE: PRT
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,745

DATE: 11/26/2001 TIME: 12:34:34

Input Set : A:\620-139.app

Output Set: N:\CRF3\11212001\1820745.raw

69 <213> ORGANISM: Artificial Sequence 71 <220> FEATURE: 72 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved 73 sequence motif 75 <400> SEQUENCE: 4 76 Gly Gly Tyr Lys Val Gln Gly 80 <210> SEQ ID NO: 5 81 <211> LENGTH: 6 82 <212> TYPE: PRT 83 <213> ORGANISM: Artificial Sequence 85 <220> FEATURE: 86 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved 87 sequence motif 89 <400> SEQUENCE: 5 90 Ile Gly Ile Gly Ala Gly 91 1 94 <210> SEQ ID NO: 6 95 <211> LENGTH: 6 96 <212> TYPE: PRT 97 <213> ORGANISM: Artificial Sequence 99 <220> FEATURE: 100 <223> OTHER INFORMATION: Description of Artificial Sequence: Conserved sequence motif 103 <400> SEQUENCE: 6 104 Asp Gly Asn Ile Leu Val 108 < 210 > SEQ ID NO: 7109 <211> LENGTH: 264 110 <212> TYPE: PRT 111 <213> ORGANISM: Escherichia coli 113 <400> SEQUENCE: 7 114 Met Lys Pro Thr Thr Ile Ser Leu Leu Gln Lys Tyr Lys Gln Asp Lys 115 1 5 10 117 Lys Arg Phe Ala Thr Ile Thr Ala Tyr Asp Tyr Ser Phe Ala Lys Leu 25 20 120 Phe Ala Asp Glu Gly Leu Asn Val Met Leu Val Gly Asp Ser Leu Gly 121 35 40 123 Met Thr Val Gln Gly His Asp Ser Thr Leu Pro Val Thr Val Ala Asp 55 126 Ile Ala Tyr His Thr Ala Ala Val Arg Arg Gly Ala Pro Asn Cys Leu 70 129 Leu Leu Ala Asp Leu Pro Phe Met Ala Tyr Ala Thr Pro Glu Gln Ala 85 90 132 Phe Glu Asn Ala Ala Thr Val Met Arg Ala Gly Ala Asn Met Val Lys 110 133 100 105 135 Ile Glu Gly Gly Glu Trp Leu Val Glu Thr Val Gln Met Leu Thr Glu 120 138 Arg Ala Val Pro Val Cys Gly His Leu Gly Leu Thr Pro Gln Ser Val

RAW SEQUENCE LISTING DATE: 11/26/2001 PATENT APPLICATION: US/09/820,745 TIME: 12:34:34

Input Set :  $A:\620-139.app$ 

Output Set: N:\CRF3\11212001\I820745.raw

	139		130					135					140				
	141	Asn	Ile	Phe	Gly	Gly	Tyr	Lys	Val	Gln	Gly	Arg	Gly	Asp	Glu	Ala	Gly
	142	145					150					155					160
	144	Asp	Gln	Leu	Leu	Ser	Asp	Ala	Leu	Ala	Leu	Glu	Ala	Ala	Gly	Ala	Gln
	145					165					170					175	
	147	Leu	Leu	Val	Leu	Glu	Cys	Val	Pro	Val	Glu	Leu	Ala	Lys	Arg	Ile	Thr
	148				180					185					190		
	150	Glu	Ala	Leu	Ala	Ile	Pro	Val	Ile	Gly	Ile	Gly	Ala	Gly	Asn	Val	Thr
	151			195					200					205			
	153	Asp	Gly	Gln	Ile	Leu	Val	Met	His	Asp	Ala	Phe	Gly	Ile	Thr	Gly	Gly
-	154		210					215					220				
	156	His	Ile	Pro	Lys	Phe	Ala	Lys	Asn	Phe	Leu	Ala	Glu	Thr	Gly	Asp	Ile
	157	225					230					235					240
	159	Arg	Ala	Ala	Val	Arg	Gln	Tyr	Met	Ala	Glu	Val	Glu	Ser	Gly	Val	Tyr
	160					245					250					255	
-	162	Pro	Gly	Glu	Glu	His	Ser	Phe	His								
	163				260												
			)> SI														
			l> Li			57											
		8 <212> TYPE: PRT															
						Schizosaccharomyces						pombe					
			)> SI	~			_ ,		_ 1	_	_,	_	_	_ ,	_	_	_
			Ser	Leu	Lys		Ile	Thr	Ile	Ser		Leu	Arg	Gln	Trp		Leu
	173	. 1		_	_	5		_	- 1	_,	10	_	_		_	15	_
		Ala	Asn	Lys	~	Phe	Ala	Cys	Ile		Ala	Tyr	Asp	Ala		Phe	Ser
	176		_	-1	20	~ 1	~ ì	a 1		25	,		_		30	_	
		Arg	Leu		Ala	GIU	GIN	GTĀ	Met	Pro	val	мет	Leu		GTÀ	Asp	ser
	L79	T 0.11	C1**	35	mh ~	λ l ¬	C1 n	C1	40	Con	mh »	mhr	T 011	45	1/2 1	Cor	v-1
		Leu	50	мес	1111	Ата	GIII	55	His	ser	1111	1111	60	PIO	val	ser	Vai
	L82	Clu		T10	λl a	Tur	Uic		Lys	Cor	Wal	λκα		C117	λ1 э	Dro	λen
	185	65	тэр	116	піа	тут	70	1111	цуз	Ser	Vai	75	ALG	GIY	AIG	110	80
			Len	Leu	Met	Δla		Leu	Pro	Phe	Met		Tur	Ser	Thr	Trn	
	188	111 9	БСи	БСи	nec	85	пър	пси	110	1 110	90	DCI	- 1 -	001	1111	95	Olu
		Asp	Ala	Cvs	Lvs		Ala	Ala	Thr	Val		Ara	Ala	Glv	Ala		Ile
	191	F		-1-	100					105		3		1	110		
		Val	Lvs	Ile	Glu	Glv	Glv	Glv	Asn	Trp	Ile	Phe	Glu	Ile		Gln	Arq
	194		1 -	115		- 1	- 1	- 1	120					125			,
		Leu	Thr	Glu	Arq	Ser	Val	Pro	Val	Ala	Gly	His	Leu	Gly	Leu	Thr	Pro
	L97		130		_						_		140	-			
-	199	Gln	Ser	Val	Asn	Ile	Phe	Gly	Gly	Tyr	Lys	Ile	Gln	Gly	Arg	Glu	Gln
		145					150	_	_	-	_	155		_	_		160
2	202	Ser	Ala	Ala	Ala	Arg	Leu	Ile	Glu	Asn	Ala	Gln	Gln	Leu	Glu	Lys	Phe
	203					165					170					175	
1	205	Gly	Ala	Gln	Leu	Leu	Val	Leu	Glu	Cys	Ile	Pro	Glu	Ser	Leu	Ala	Glu
	206				180					185					190		
4	802	Gln	Ile	Thr	Lys	Thr	Ile	Ser	Ile	Pro	Thr	Ile	Gly	Ile	Gly	Ala	Gly
	209			195					200					205			
2	211	Lys	His	Thr	Asp	Gly	Gln	Ile	Leu	Val	Met	His	Asp	Ala	Leu	Gly	Ile

RAW SEQUENCE LISTING

DATE: 11/26/2001 TIME: 12:34:34

PATENT APPLICATION: US/09/820,745 TIME: 12:34:34

Input Set : A:\620-139.app

Output Set: N:\CRF3\11212001\1820745.raw

212		210					215					220				
	Thr		Glv	Arg	Pro	Pro		Phe	Ala	Lvs	Asn		Leu	Ser	Glv	Ala
	225	1	1			230	-1-			-1-	235				1	240
		Asp	He	Arg	Thr		Ile	Gln	Ara	Tvr		Tyr	Glu	Val	Glu	
218		- 1		,	245					250		1			255	
	Glv	Leu	Tyr	Pro		Glu	Glu	His	Ser	Phe	Gln					
221	1		1	260					265							
	<210	0> S	EO II	D NO	: 9											
				H: 3												
		2> T														
				ISM:	Aspe	ergi:	llus	nid	ulan	s						
				NCE:												
				Leu		Ile	Ala	Thr	Lys	Arg	Ala	Ile	Tyr	Leu	His	Arg
231	1				5				-	10			-		15	,
233	Pro	Ala	Asn	Pro	Ala	Leu	Pro	Thr	Ser	Ser	Ile	Leu	Pro	Val	Leu	His
234				20					25					30		
236	Ser	Thr	Asn	Val	Ala	Thr	Arg	Val	Pro	Ser	Pro	Cys	Ala	Ile	Arg	His
237			35					40					45		-	
239	Ser	Ser	His	Ser	Pro	Leu	Gly	Ala	Ala	Gln	Ala	Asn	Pro	Arg	Lys	Lys
240		50					55					60				
242	Val	Thr	Met	Gln	Thr	Leu	Arg	Asn	Leu	Tyr	Lys	Lys	Gly	Glu	Pro	Ile
243	65					70					75					80
245	Thr	Met	Leu	Thr	Ala	His	Asp	Phe	Pro	Ser	Ala	His	Val	Ala	Asp	Ala
246					85					90					95	
248	Ala	Gly	Met	Asp	Met	Ile	Leu	Val	Gly	Asp	Ser	Leu	Ala	Met	Val	Ala
249				100					105					110		
	Leu	Gly	Met	Gln	Asp	Thr	Ser	Glu	Val	Thr	Leu	Asp	Asp	Met	Leu	Val
252			115					120					125			
	His	Cys	Arg	Ser	Val	Ala	Arg	Ala	Ala	Gln	Ser	Ala	Phe	Thr	Val	Ser
255		130					135					140				
	_	Leu	Pro	Met	Gly		Tyr	Glu	Val	Ser		Glu	Gln	Ala	Leu	
258	145					150					155					160
	Ser	Ala	Ile	Arg		Val	Lys	Glu	Gly		Val	Gln	Gly	Val		Leu
261	_	_	_	_	165		_		_	170			_	_	175	_
	Glu	Gly	Gly	Glu	Glu	Met	Ala	Pro		Ile	Lys	Arg	Ile		Thr	Ala
264	~ 1	-1	_	180	1	~ 1		- 1	185	_	-1	_	3	190	_ 1	_
	Gly	ile		Val	Val	Gly	His		Gly	Leu	Thr	Pro		Arg	GIn	Asn
267	- 1	_	195	<b>a</b> 1	51		1	200	<b>a</b> 1	_		<b></b>	205			_
	Ala		GIY	Gly	Phe	Arg		Gin	GIY	Lys	Ser		Thr	Asp	Ala	Leu
270	<b>T</b>	210	<b>.</b>	T		. 1 -	215	. 1 .	17- 1	<b>a</b> 1	<b>a</b> 1	220	<b>a</b> 1	. 1 -	73 l	
		Leu	Leu	Lys	Asp		Leu	Ala	vaı	GIII		Ala	GIA	Ата	Pne	
	225	17a ]	т1.	<b>01</b>	21-	230	D	D	G1	T1.	235	C	T1.	17 I	m l	240
275 276	тте	٧d⊥	тте	Glu	A1a 245	νdΙ	PLO	PLO	GIU	250	Ald	ser	тте	٧dl		GTU
	Tvc	T 011	Cor	W = 1		Th∽	т1 ^	C 1 ***	т1 ^		7 l ~	C 1 ***	λαν	C1.	255 Cwc	C0~
279	гуз	ьeu	ser	Val 260	PIO	1111	тте	отА	265	стА	HId	ату	ASII	270	Cys	ser
	Glv	Gln	Wa 1	Leu	Val	Gln	Tlo	λαρ		ТЪг	Glu	λαη	Dho		Dro	Glv
282	GTA	GIII	275	neu	v ci I	GTII	TIE	280	met	TIIT	GTÅ	HOII	285	FIO	FIO	ату
	Ara	Ph⊖		Pro	Lvc	Phe	Val		Gln	Tur	Δla	Aen		Trn	Δcn	Glu
207	9	1 116	Deu	110	пlэ	LIIC	· uı	Lys	OIII	- 1 T	ALG	11011	+ u ⊥	1 - F	77.71	JIU

RAW SEQUENCE LISTING

DATE: 11/26/2001 TIME: 12:34:34

PATENT APPLICATION: US/09/820,745

Input Set : A:\620-139.app

Output Set: N:\CRF3\11212001\I820745.raw

285		290					295					300				
	Ala		Gln	Glv	Ile	Gln		Tvr	Ara	Glu	Glu		Lvs	Ser	Ara	Ala
	305			1		310		1	5		315		1		5	320
290	Tvr	Pro	Ala	Glu	Gln		Thr	Tvr	Pro	Ile		Lvs	Glu	Glu	Leu	
291	1				325			4		330		1 -			335	
	Glu	Phe	Gln	Lvs	Ala	Val	Asp	Glu	Leu	Pro	Glu	Glu	Lvs			
294		-		340			- 1		345				1 -			
	<210	0> S	EQ II		: 10											
			~ ENGTI													
			YPE:													
			RGAN		Aral	oidor	osis	t.ha	liana	a						
			EOUEI													
303	Met	Ala	ser	Ser	Leu	Thr	Arq	Asn	Cvs	Ser	Ara	Phe	Ser	Lvs	Ala	Ile
304	1				5		,		_	10				-	15	
306	Ser	Val	Arg	Phe	Met	Ser	Asn	Leu	Pro	Glu	Asn	Thr	Val	Tyr	Gly	Gly
307				20					25					30	-	_
309	P.ro	Lys	Pro	Gln	Asn	Pro	Asn	Gln	Arg	Val	Thr	Leu	Thr	His	Leu	Arg
310		-	35					40	_				45			_
312	Gln	Lys	His	Arg	Arg	Gly	Glu	Pro	Ile	Thr	Val	Val	Thr	Ala	Tyr	Asp
313		50				-	55					60			_	_
315	Tyr	Pro	Ser	Ala	Val	His	Leu	Asp	Thr	Ala	Gly	Ile	Asp	Val	Cys	Leu
316	65					70					75					80
318	Val	Gly	Asp	Ser	Ala	Ser	Met	Val	Val	His	Gly	His	Asp	Thr	Thr	Leu
319					85					90					95	
321	Pro	Ile	Ser	Leu	Asp	Glu	Met	Leu	Val	His	Cys	Arg	Ala	Val	Ala	Arg
322				100					105					110		
324	Gly	Ala	Lys	Arg	Pro	Leu	Leu	Val	Gly	Asp	Leu	Pro	Phe	Gly	Thr	Tyr
325			115					120					125			
327	Glu	Ser	Ser	Ser	Ser	Gln	Ala	Val	Asp	Thr	Ala	Val	Arg	Val	Leu	Lys
328		130					135					140				
		Gly	Gly	Met	Asp		Ile	Lys	Leu	Glu	_	Gly	Ser	Ala	Ser	Arg
	145					150					155					160
	Ile	Thr	Ala	Ala	_	Ala	Ile	Val	Glu		Gly	Ile	Ala	Val		Gly
334					165					170					175	
	His	Val	Gly		Thr	Pro	Gln	Ala		Ser	Val	Leu	Gly		Phe	Arg
337	_			180	_			_	185		_			190		
	Pro	GIn	Gly	Arg	Asn	He	Ala		Ala	Val	Lys	Val		Glu	Thr	Ala
340			195	~ 3	~ 1		~ 1	200	_,			1	205		_	,
	Met		Leu	GIn	G1u	Ala		Cys	Phe	Ser	Val		Leu	Glu	Cys	Val
343	_	210	•.	1	- 1		215		1		- 1	220	_	- 1	_	
		РГО	Pro	va⊥	Ата		АТа	АТа	Thr	ser		Leu	Lys	тте	Pro	
	225	<b>a</b> 1	<b>-1</b> -	.11	<b>3</b> 1 -	230	D	D1	<b>G</b>	<b>a</b>	235	a1.	77. 1	<b>.</b> .	** - 1	240
	11'6	стА	Ile	етλ		стА	Pro	ьиe	cys		СΤΆ	GIN	vaı	Leu		тyr
349	п: -	7	T ~ · ·	T	245	Mak	Mot	C1-	114 -	250	rr: -	TT	71-	T	255 Val	m k
	H1.S	ASP	Leu		στλ	wer	мег	GTII		PI.O	HIS	HIS	Ald		vdl	1111.
352	Dro	T	Dha	260	T ***	C15	П	л I ¬	265	17 - 1	01	C1	17 - 1	270	<b>A</b> ~ ~	T
355	P1 ()	гуѕ	Phe 275	∵yS	гуя	GTII	ı A I.		ASII	val	стА	GIU		тте	ASII	гаг
	λla	Lou	Met	<i>(</i> 21)	Тих	Lvc	Clu	280	Va l	Cor	T v.c	T v.c	285	Dho	Dro	C111
551	мта	ьeu	Mer	GIU	TAT	гуэ	GIU	GIU	val	261	rllp	$rr\lambda z$	val	FIIE	PIO	отА



Use of n and / or Xaa has been detected in the Sequence Listing Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/820,745

DATE: 11/26/2001 TIME: 12:34:35

Input Set : A:\620-139.app

Output Set: N:\CRF3\11212001\I820745.raw

L:62 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 L:486 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:489 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  $L\!:\!492$  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12L:501 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:504 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  $L\!:\!510$   $M\!:\!341$  W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:516 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:519 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:522 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:525 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  $L\!:\!528$   $M\!:\!341$   $W\!:$  (46) "n" or "Xaa" used, for SEQ ID#:12 L:531 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 L:537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12